

ABSTRACT OF THE DISCLOSURE

[0104] The invention relates to a method for measuring the level of a preselected analyte in a sample such as of blood of a human or animal patient by incubating the test sample with an antibody specific to the analyte to form an immunocomplex, which then interacts with the white blood cells present in or added to the sample and result in the production of oxidants. Oxidants are detected using chemiluminescent reagents. The assay is performed on the sample and in addition may include a measurement of the oxidant production resulting from a maximal stimulatory dose of immunocomplexes, providing a ratio to indicate the level of analyte in the sample. The white blood cell oxidant response may be enhanced by the inclusion of certain agents such as zymosan or complement. This method may be used to determine levels of analytes in a sample of a patient's blood including endotoxin and other analytes related to sepsis, in order to select the proper therapeutic course, or may be used to measure other analytes such as inflammatory mediators, hormones, acute phase proteins, toxins, drugs of abuse, markers of cardiac muscle damage, therapeutic drugs, cytokines, and chemokines.